

|           |       |   |
|-----------|-------|---|
| 1         |       | 50  |
| AtBI-1    | (1)   | -----MDAFSSFFDSQPGS---RSWSYDSLKNFRQISPAVQNHCLKR     |
| BnBI-1    | (1)   | -----MDSFSSFFDSQPGS---RSWSYDSLKNLRQISPSVQNHCLKR     |
| GmBI2     | (1)   | -----RLQAMDAFNSFFDS-----RNRWNYDTLKNFRQISPVVQNHCLKQ  |
| GmBI3     | (1)   | ITKTIRFDSLFSMDTFFKSPSSSSSRWSYDTLKNFREISPLVQNHKL     |
| HVBI-1    | (1)   | -----MDAFYSTS---SAAASGWGHDSLKNFRQISPAVQSHLKL        |
| NtBI-1    | (1)   | -----MESCTSFNSQSASS-RNRWSYDSLKNFRQISPFVQTHLKK       |
| OsBI-1    | (1)   | -----MDAFYSTSSAYGAAASGWGYDSLKNFRQISPAVQSHLKL        |
| TaBI11    | (1)   | -----   |
| TaBI18    | (1)   | -----FSGTFRNSRSDDFVLCELQRELPRCRDATLTV               |
| TaBI5 new | (1)   | -----VAMPGR   |
| ZmBI14    | (1)   | -----   |
| ZmBI16    | (1)   | -----   |
| ZmBI33    | (1)   | -----   |
| ZmBI8     | (1)   | -----   |
| Consensus | (1)   | F S W YDSLKN R ISP VQ HLK                           |
|           | 51    | 100   |
| AtBI-1    | (39)  | VYLTLCALVASAFGAYLHVLWNIGGILTTIGCIGTMIWLLSCPPYEHQK   |
| BnBI-1    | (39)  | VYLTLCALVASAFGAYLHVLWNIGGILTTIGCFGSMIWLLSCPPYEQK    |
| GmBI2     | (40)  | VYFTLCFAVVAAVGAFLHVLWNIGGFLTTVACMGSSFLLSTPPFEERK    |
| GmBI3     | (51)  | VYFTLCFAVVAAVGAFLHVLWNIGGFLTTLASIGSMFWLLSTPPFEQK    |
| HVBI-1    | (37)  | VYLTLCFALASSAVGAYLHIALNIGGMLTMLACVGTIAWMFVSPVYEERK  |
| NtBI-1    | (41)  | VYLSLCCALVASAAGAYLHILWNIGGLLTTLGCVGSIVWLMATPLYEEQK  |
| OsBI-1    | (40)  | VYLTLCVALAASAVGAYLHVALNIGGMLTMLGCVGSIAWLFSVPVFEERK  |
| TaBI11    | (1)   | -----   |
| TaBI18    | (33)  | VYVIPIVGRIKSAAGAYLHIALNIGGMLTMLACIGTIAWMFVSPVYEERK  |
| TaBI5 new | (7)   | RFRLTYALPGLICRGCLPAHCPEHWRDADNARVYRNHRLDVLGASLRGEE  |
| ZmBI14    | (1)   | -----GSIWLFSVPVYEERK                                |
| ZmBI16    | (1)   | -----WNIGVRLTMLGCIGSIDWLFSVPVYEERK                  |
| ZmBI33    | (1)   | -----WNIGGTLTMLGCVGSIAWLFSVPVYEERK                  |
| ZmBI8     | (1)   | -----   |
| Consensus | (51)  | VY TLC AL ASA GAYLHV NIGG LT LGCIGSI WL S PVYEERK   |
|           | 101   | 150   |
| AtBI-1    | (89)  | RLSLLFVSAVLEGASVGPLIKVAIDVDPSILITAFVGTIAIAFVCFSAAM  |
| BnBI-1    | (89)  | RLSLLFLSAVLEGASVGPLIKVAVDFDPSILITAFVGTIAIAFICFSGAAM |
| GmBI2     | (90)  | RVTLLMAASLFQGSIGPLIDLAIHIDPSLIFSAFVGTALAFACFSGAAL   |
| GmBI3     | (101) | RLSLLMASALFQGSIGPLIDLAFIDPGLIIGAFVATSLAFACFSAVAL    |
| HVBI-1    | (87)  | RFGLLMGAALLEGASVGPLIELAIDFDPSILVTGFVGTIAIAFGCFSGAAI |
| NtBI-1    | (91)  | RIALLMAAALFKGASIGPLIELAIDFDPSIVIGAFVGCFAVGCFSAAAM   |
| OsBI-1    | (90)  | RFGILLAAALLEGASVGPLIKLAVDFDSSILVTAFVGTIAIAFGCFTCAAI |
| TaBI11    | (1)   | -----AAI  |
| TaBI18    | (83)  | RFGLLMGAALLEGASVGPLIELAIDFDPSILVTGFVGTIAIAFGCFSGAAI |
| TaBI5 new | (57)  | EVWAADGCSLLEGASVGPLIELAIDFDPSILVTGFVGTIAIAFGCFSGAAI |
| ZmBI14    | (17)  | RYWLLMAAALLEGASVGPLIKLAVEFDPSILVTAFVGTIAIAFACFSCAAM |
| ZmBI16    | (30)  | RYGLLMAAALLEGASVGPLVKLAVEFDPSILVTAFVGTIAIAFACFSGAAM |
| ZmBI33    | (30)  | RYGLLMAAALLEGASVGPLVKLAVEFDPSILVTAFVGTIAIAFACFSGAPW |
| ZmBI8     | (1)   | -----VIDLDSRILVTAFVGTAVAFACFSGAAI                   |
| Consensus | (101) | R LLMAAALLEGASVGPLI LAIDFDPSILVTAFVGTIAIAFACFSGAAI  |

Fig. 1a

|           |       |   |     |
|-----------|-------|---|-----|
|           |       | 151   | 200 |
| AtBI-1    | (139) | LARRREYLYLGGLLSSGLSMLMWLQFASSIFG-GSASIFKFELYFGLLIF    |     |
| BnBI-1    | (139) | LARRREYLYLGGLLSSGLSMLMWLQFASSIFG-GSASIFKFELYFGLLIF    |     |
| GmBI2     | (140) | VARRREYLYLGGLVSSGLSILLWLHFASSIFG-GSTALFKFELYFGLLVF    |     |
| GmBI3     | (151) | VARRREYLYLGGLLSSWLSILMWLHSDSSLFG-GSIALFKFELYFGLLVF    |     |
| HVBI-1    | (137) | IAKRREYLYLGGLLSSGLSILLWLQFVTSIFGHSS-GSFMFEVYFGLLIF    |     |
| NtBI-1    | (141) | VARRREYLYLGGLLSSGLSILFWLHFASSIFG-GSMALFKFELYFGLLVF    |     |
| OsBI-1    | (140) | VAKRREYLYLGGLLSSGLSILLWLQFAASIFGHST-GSFMFEVYFGLLIF    |     |
| TaBI11    | (4)   | IAKRREYLYLGGLLSSGLSILLWLQFATSIFGHSS-GSFMFEVYFGLLIF    |     |
| TaBI18    | (133) | IAKRREYLYLGGLLSSG-----LTIL                            |     |
| TaBI5 new | (107) | IAKRREYLYLGGLLSSGLSILLWLQFATSIFGHSS-GSFMFEVYFGLLIF    |     |
| ZmBI14    | (67)  | VAKRREYLYLGGLLSSGLSILLWLQFAASIFGHQSTSSFMFEVYFGLLIF    |     |
| ZmBI16    | (80)  | VARRREYLYLGGLLSSGLSILLWLQLAASIF-GHSATSFMEVYFGLLIF     |     |
| ZmBI33    | (80)  | WQAR-EYLYLGCSRSGSPSCSGCSSPPSS--ALRNSFMFEVYFGLLIL      |     |
| ZmBI8     | (29)  | IAKRREYLYLGGLLSSGLSILLWLQFATSIFGHTS-ATFMFEVYFGLLVF    |     |
| Consensus | (151) | VAKRREYLYLGGLLSSGLSILLWLQFASSIFG S ASFMFEVYFGLLIF     |     |
|           |       | 201   | 250 |
| AtBI-1    | (188) | VGVMVVDTQEIIIEKAHLGDMDYVKHSLTLFTDFVAVFVRILIIMLKNSAD   |     |
| BnBI-1    | (188) | VGVMVVDTQDIIIEKAHLGDMDYVKHSLTLFTDFVAVFVRVLIIMLKNSAD   |     |
| GmBI2     | (189) | VGIVVDTQEIVERAHLGDLVDYVKHALTLFTDLVAVFVRILVIMLKNSTE    |     |
| GmBI3     | (200) | VGIVVDTQEIIERAHFGDLVDYVKHALTLFTDLAAIFVRILIIMLKNSSE    |     |
| HVBI-1    | (186) | LGYMVDYDTQEIIERAHHGDMDYIKHALTLFTDFVAVLVRVLIIMLKNSAGD  |     |
| NtBI-1    | (190) | VGIIIFDTQDIIIEKAHLGDLVDYVKHALTLFTDFVAVFVRILIIMLKNSAD  |     |
| OsBI-1    | (189) | LGYMVDYDTQEIIERAHHGDMDYIKHALTLFTDFVAVLVRILVIMLKNSAD   |     |
| TaBI11    | (53)  | LGYMVDYDTQEIIERAHHGDMDYIKHALTLFTDFVAVLVRILIIIMLKNSAGD |     |
| TaBI18    | (154) | L-----  |     |
| TaBI5 new | (156) | LGYMVDYDTQEIIERAHHGDMDYIKHALTLFTDFVAVLVRVLIILLKNAAD   |     |
| ZmBI14    | (117) | LGYMVDYDTQEVIERAHHG-----                              |     |
| ZmBI16    | (129) | LGYVVDYDT-----  |     |
| ZmBI33    | (127) | LG-----   |     |
| ZmBI8     | (78)  | LGYMVFDYDTQEIIERAHRGDMDYIKHALTLFTDFVAVLVRILVIMMKNAQE  |     |
| Consensus | (201) | LGYMVDYDTQEIIERAH GDMDYIKHALTLFTDFVAV VRILIIIMLKNA D  |     |
|           |       | 251   | 300 |
| AtBI-1    | (238) | KEEKKKKRRN-----GDVK-I-LYGCYRVWPL-RYYLLALSIGDQTCF      |     |
| BnBI-1    | (238) | KEDKKKKRRN-----D-KVRKKAK-SGCYVCFKK-----KRVG           |     |
| GmBI2     | (239) | RNEKKKKRRD-----                                       |     |
| GmBI3     | (250) | RNEKKKKRRD--ADRPTRAQASLQ-FSLWRIHN-----LFR-CWSLV-      |     |
| HVBI-1    | (236) | KSEDKKKKRKG-----S-----                                |     |
| NtBI-1    | (240) | KEEKKKKRRN-----CISGYSKTL-L-NLAFSCS---TSVDLRQVCC--FG   |     |
| OsBI-1    | (239) | KSEEKKKKRRS-ELLFPLCT-EKTTAAIASTYYDRAALQLGFMVNTSSFA    |     |
| TaBI11    | (103) | KSEDKKKKRRS-----                                      |     |
| TaBI18    | (155) | -----   |     |
| TaBI5 new | (206) | KVGGQEEEEEEKS-----                                    |     |
| ZmBI14    | (135) | -----   |     |
| ZmBI16    | (137) | -----   |     |
| ZmBI33    | (129) | -----   |     |
| ZmBI8     | (128) | KSQDEKKRK-----  |     |
| Consensus | (251) | K E KKKRR   |     |

Fig. 1b

|           |       |  |     |     |
|-----------|-------|--|-----|-----|
|           |       | 301  |     | 350 |
| AtBI-1    | (278) | H-KG-SACFTSAQVPSSDCK-----LECCSSFHKLLFFKSL            |     |     |
| BnBI-1    | (269) | VISTDMIALVFFTCLEQFW-----QHTLRICVFLLVTPDCEWI          |     |     |
| GmBI2     | (249) | -----  |     |     |
| GmBI3     | (288) | LVS YVFAVMVNVRI SFKHLHMYLPIS-CVV-HHTLV-KKKKKKKKKKKKK |     |     |
| HVBI-1    | (248) | -----  |     |     |
| NtBI-1    | (279) | NASD-AARLCYAAQCQGYGGT-MVLF----PKHTIK-HACLHYIDNLRVY   |     |     |
| OsBI-1    | (287) | FC-YGVNLLRFVVVVALQILACYMTRIFL-WWSR-SKRENTSSFATNLFA   |     |     |
| Consensus | (301) |  |     |     |
|           |       | 351  |     | 400 |
| AtBI-1    | (312) | VLLIASYQAKNNVGK-----SCLNFLKCVHFRKKKKKKKKK-----       |     |     |
| BnBI-1    | (307) | SILKLC-KLSVGS-----                                   |     |     |
| GmBI2     | (249) | -----  |     |     |
| GmBI3     | (335) | KKKKKXXXXXXXXXXXXX--XXXXXGVCGLRYSRHSSNH-EGSLW-PGLC-  |     |     |
| HVBI-1    | (248) | -----  |     |     |
| NtBI-1    | (322) | YLFLLPFAVLGCS-LYS-FSVMLDHLLS-RLISHIDGRNENSHRRPNLFK   |     |     |
| OsBI-1    | (334) | FW-LMMILSPKKKK-----                                  |     |     |
| Consensus | (351) |  |     |     |
|           |       | 401  |     | 450 |
| AtBI-1    | (348) | -----  |     |     |
| BnBI-1    | (319) | -----  |     |     |
| GmBI2     | (249) | -----  |     |     |
| GmBI3     | (380) | ACIDTVH-FGCNLCANS-YNVE-FI-EK-EEEEERLIG-PIAMCRVIWFV   |     |     |
| HVBI-1    | (248) | -----  |     |     |
| NtBI-1    | (369) | TEAQL-----   |     |     |
| Consensus | (401) |  |     |     |
|           |       | 451  |     | 500 |
| GmBI3     | (424) | ENT-LAV-KLLVPLCS--LAMCLL-W-MSGFLLNIFICIC--S-YIV-TS   |     |     |
| Consensus | (451) |  |     |     |
|           |       | 501  | 512 |     |
| GmBI3     | (464) | FLGLKKEKKKKK   |     |     |
| Consensus | (501) |  |     |     |

Fig.1c

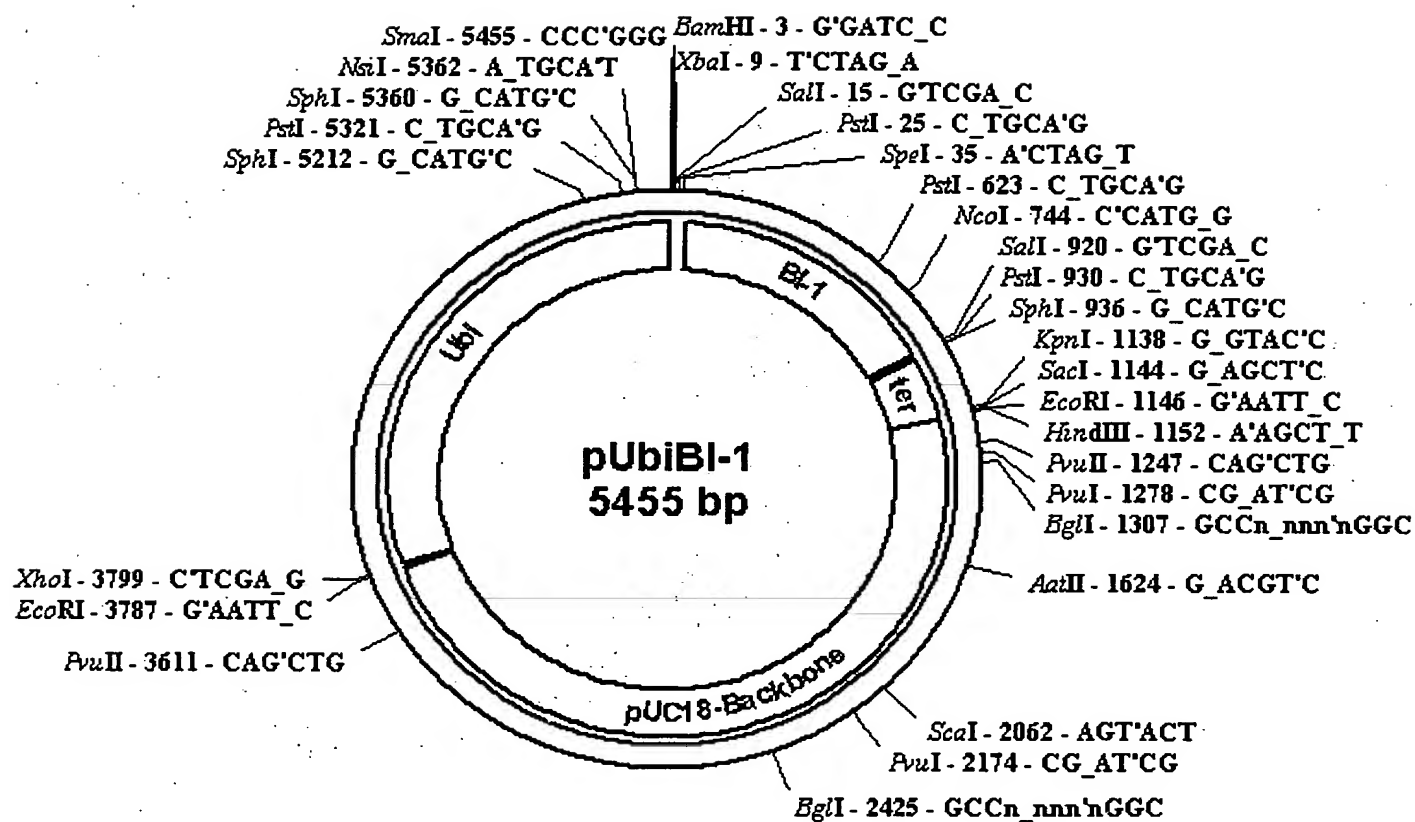


Fig. 2

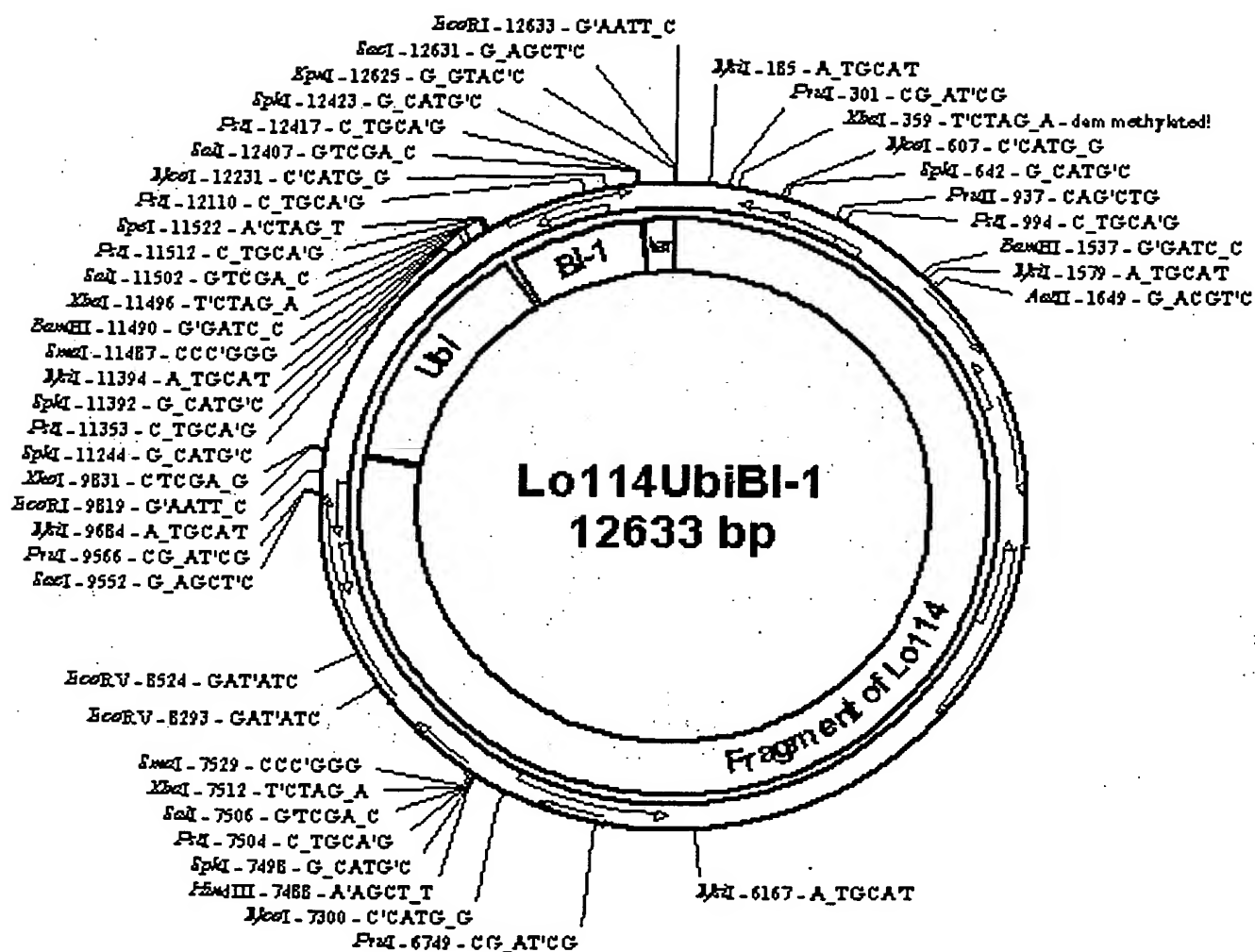


Fig. 3

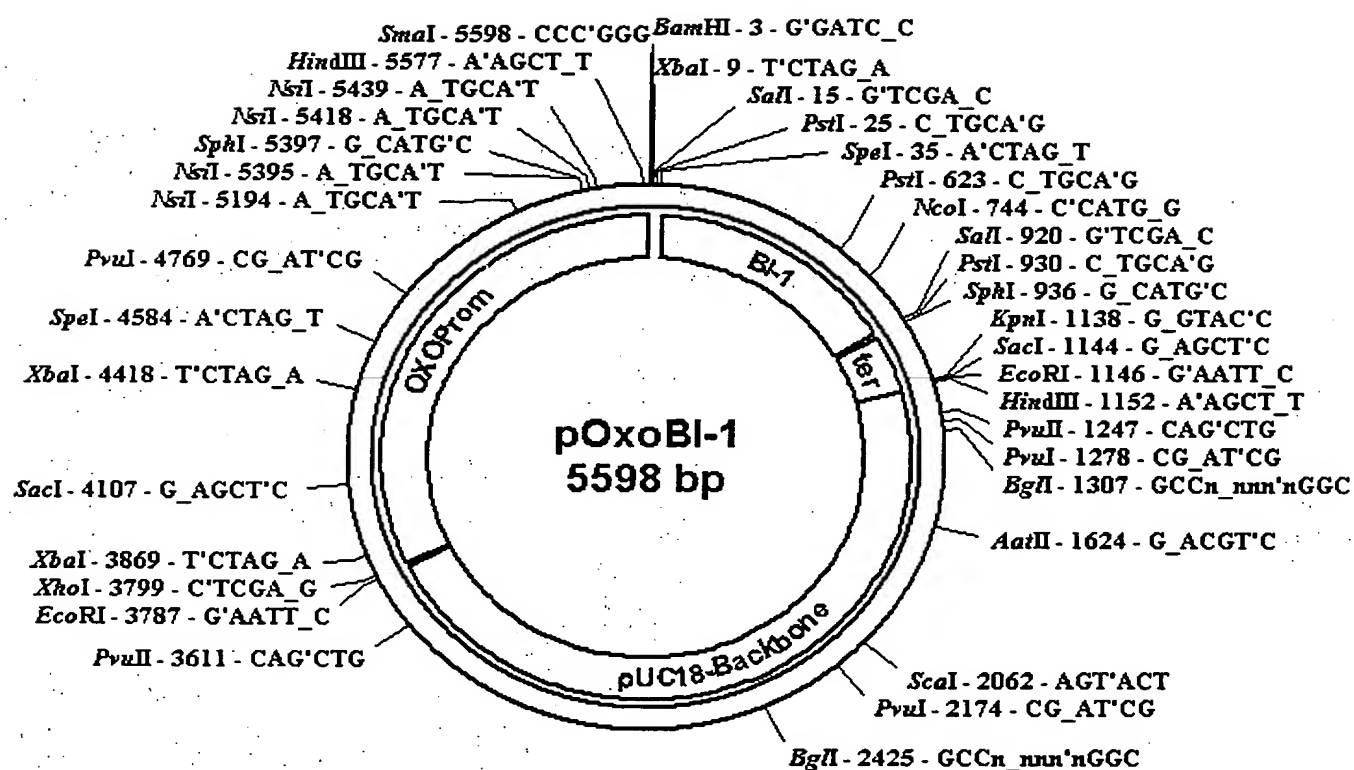


Fig. 4

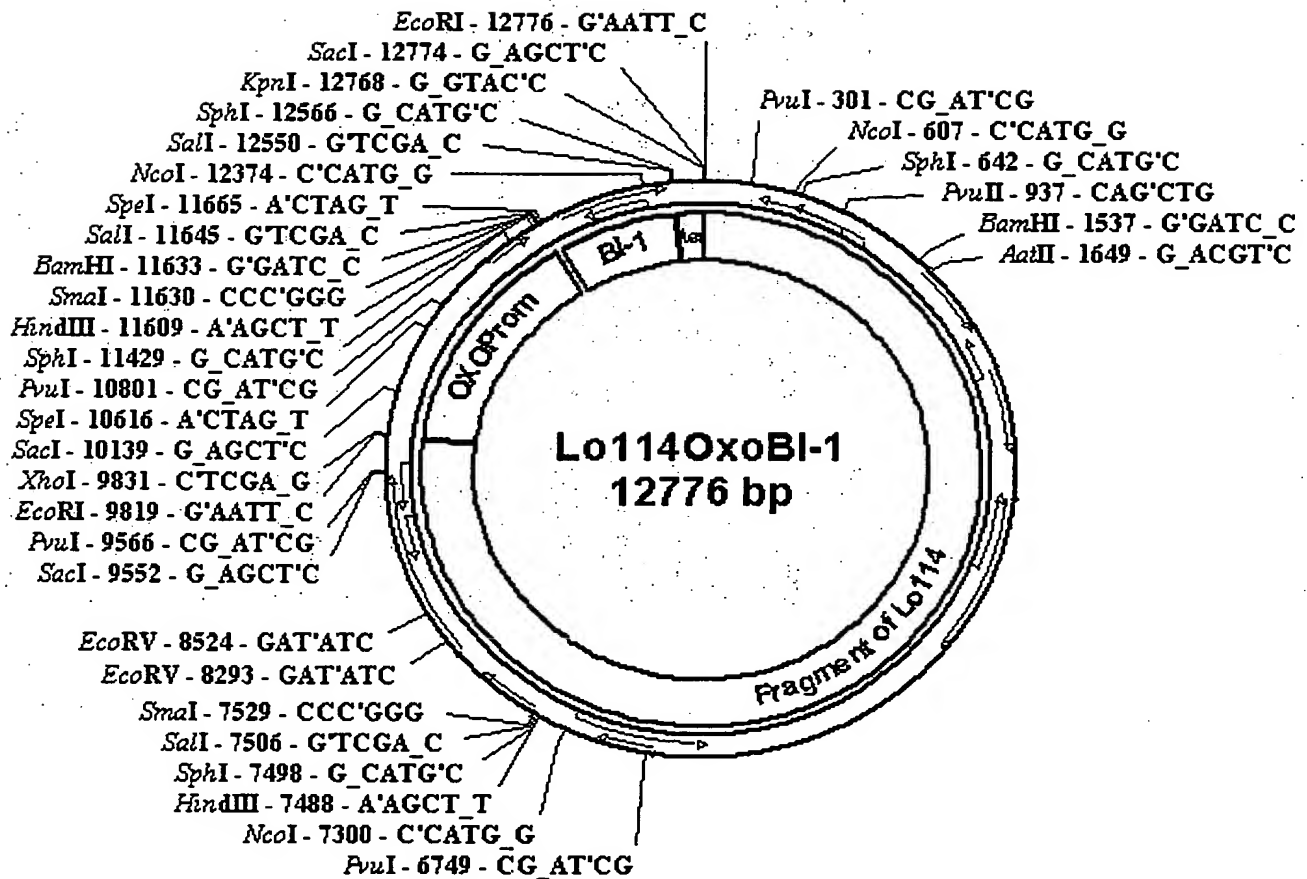


Fig. 5

*H. vul.* MDAFYSTSS---AAASGUGHDSLKNNFRQISPAVCSHLKLVYLTLCFALASSAVGAYLHIA 57  
*O. sat.* MDAFYSTSSAYGAAASGUGYDSLKNNFRQISPAVCSHLKLVYLTLCVALAASAVGAYLHVA 60  
*A. tha.* MDAFSSFFDS-OPGSRSSYSLSLKNNFRQISPAVQNHLLKRVYLTLCALVASAFGAYLHVL 59  
*H. sap.* MNIFDRKIN-----FLALLKESHITPSTQCHLKKVYASFALCMFVAAGAYVHMV 50

---

*H. vul.* LN--IGGMLTMLACVGTIAMMFVSPVYEE--RKRFGLLMGALLLEGASVGPLIELAIDFD 113  
*O. sat.* LN--IGGMLTMLGCVGSIAMLFSVPVFEE--RKRFGILLAAALLEGASVGPLIKLAVDFD 116  
*A. tha.* UN--IGGILTTIGCIGTHIWLLSCPPYEH--QKRLSLLFVSAVLEGASVGPLEIKVAIDVD 115  
*H. sap.* THFIQAGLLSALGSLILMIWLMATPHSHETECKRLGLLAGFAFLTGVGLGPALEFCIAVN 110

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*H. vul.* PSILVTGFGVTAFAGCFSGAIIIAKRREYLYLGCLSSGLSILLWLOFVTSIFGHSSGS 173  
*O. sat.* SSILVTAFVGTAFAGCFCTCAIVAKRREYLYLGCLSSGLSILLWLOFAASIFGHSTGS 176  
*A. tha.* PSILITAFVGTAFVCFSAAMLAERREYLYLGCLSSGLSMIMWLOFASSIFGGSASI 175  
*H. sap.* PSILPTAFMGTAIETCFETLSALYARRESYFLGGILMSALSLLLSSLGNVFFG-SIWP 169

---

*H. vul.* FMFEVYFGLLIFLGYHVYDTCEIIERAHHGDMDYIKHALTLFTDFVAALVRVLIIMLKNA 233  
*O. sat.* FMFEVYFGLLIFLGYHVYDTCEIIERAHHGDMDYIKHALTLFTDFVAALVRILVIMLKNA 236  
*A. tha.* FKFELYFGLLIIVGYHVYDTCEIIIEKAHLGDMDYVKSLSLTFTDFVAALVRILIMLKMS 235  
*H. sap.* EQANLYVGLVVMCGFVLVDTCLEIEKAHEGDCDYIWHCIDLFLDFITDFRKLHMLAMME 229

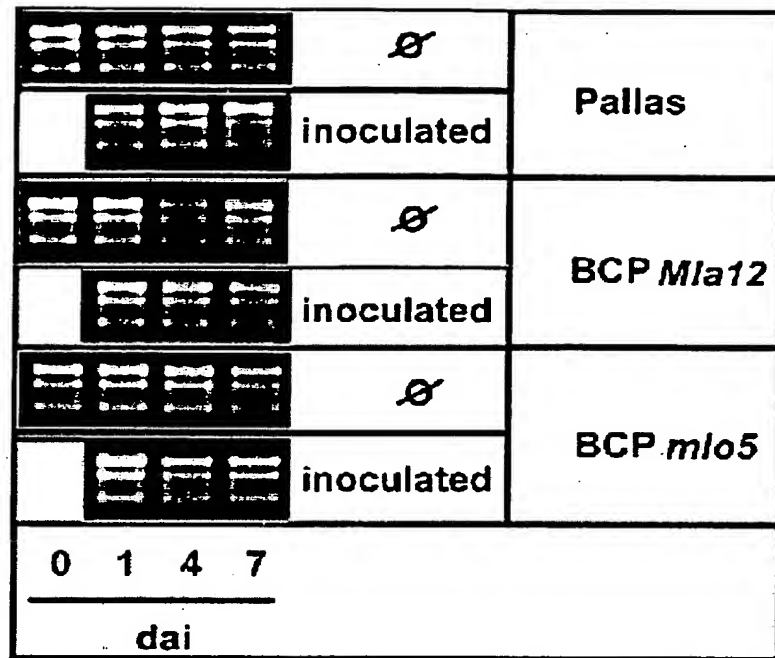
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*H. vul.* GDRSEDKKRKRGS 247  
*O. sat.* SDRSEEKKRKKRS- 249  
*A. tha.* ADR-EEKKKRRN- 247  
*H. sap.* KDR---KREKK--- 237

Fig. 6



## rRNAs



## BI-1

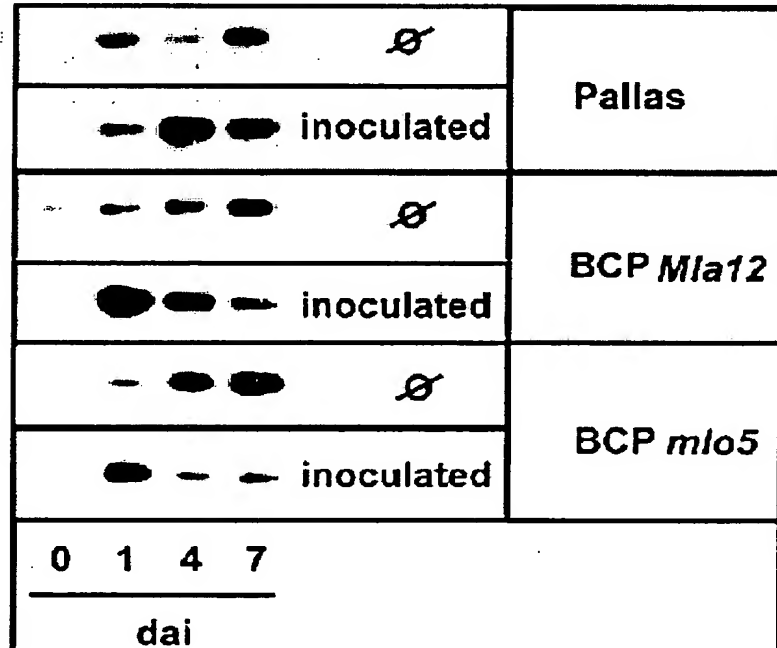
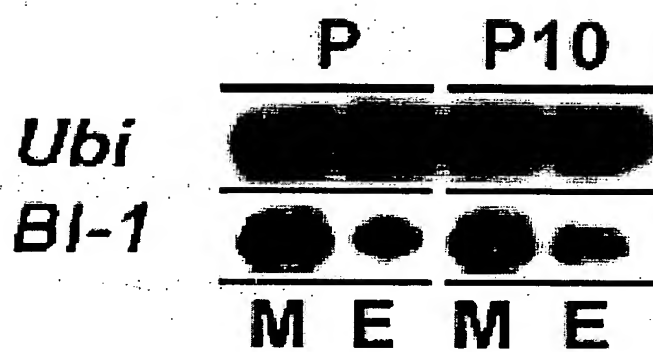


Fig.7

**Fig. 8**

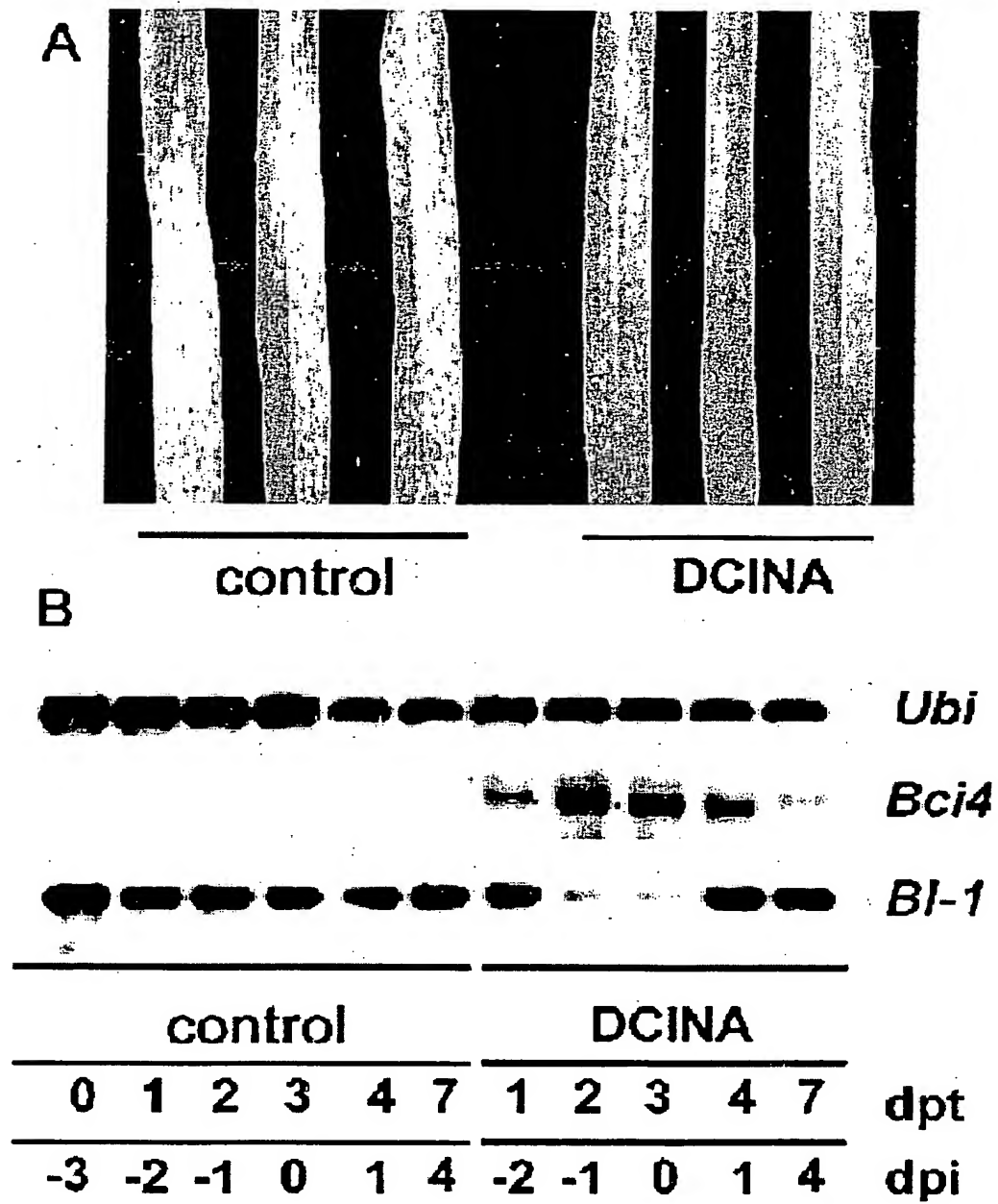
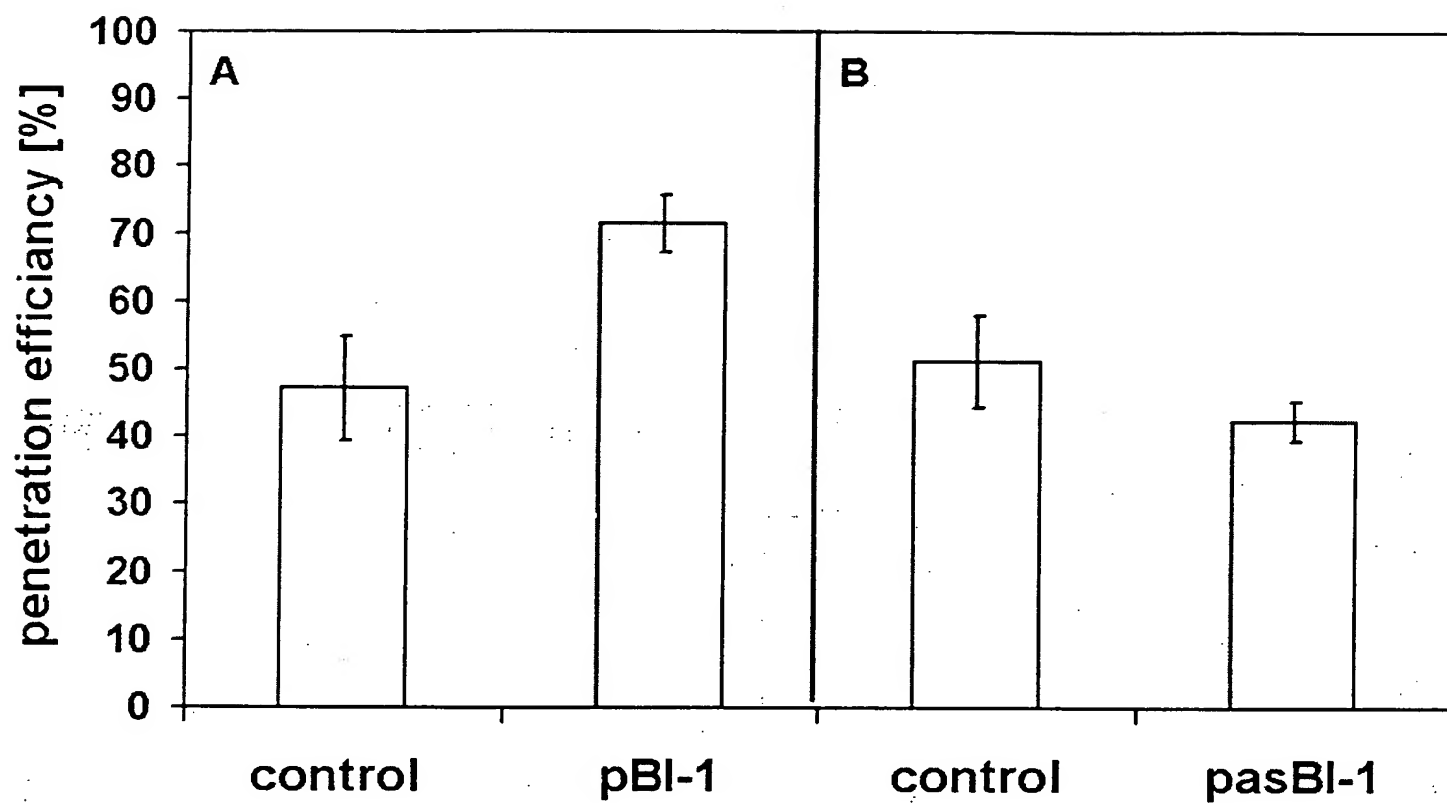
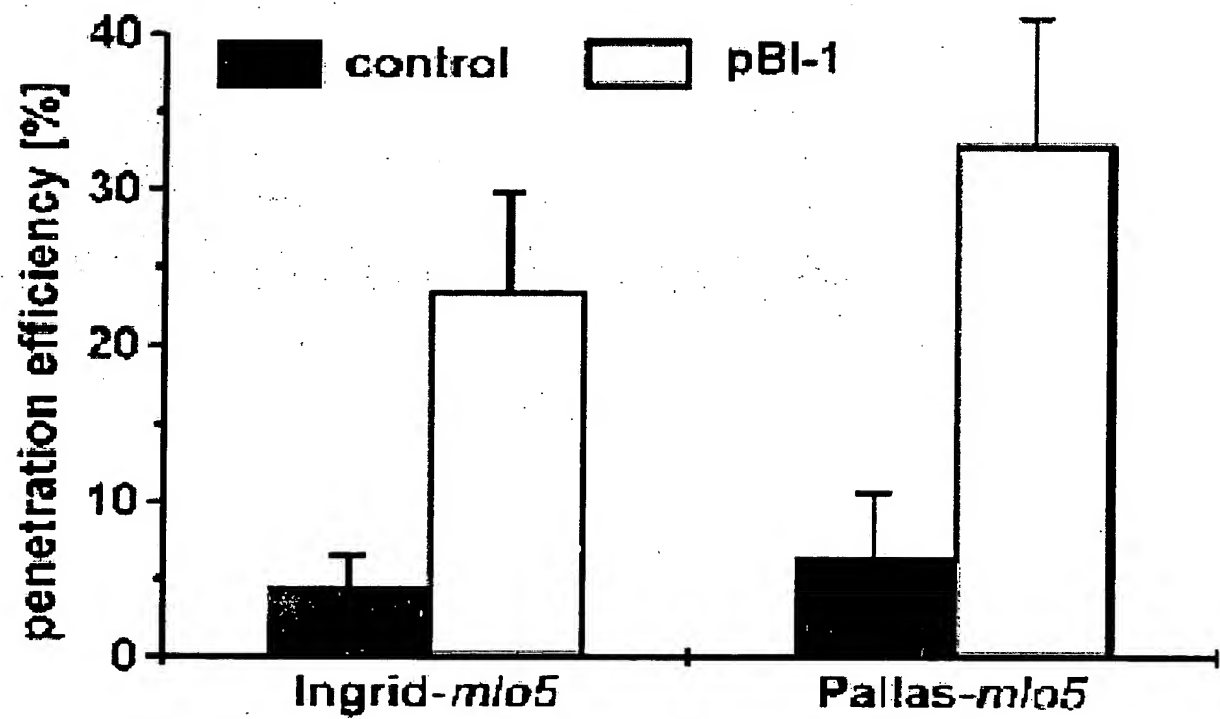


Fig. 9

**Fig. 10**

**Fig.11**

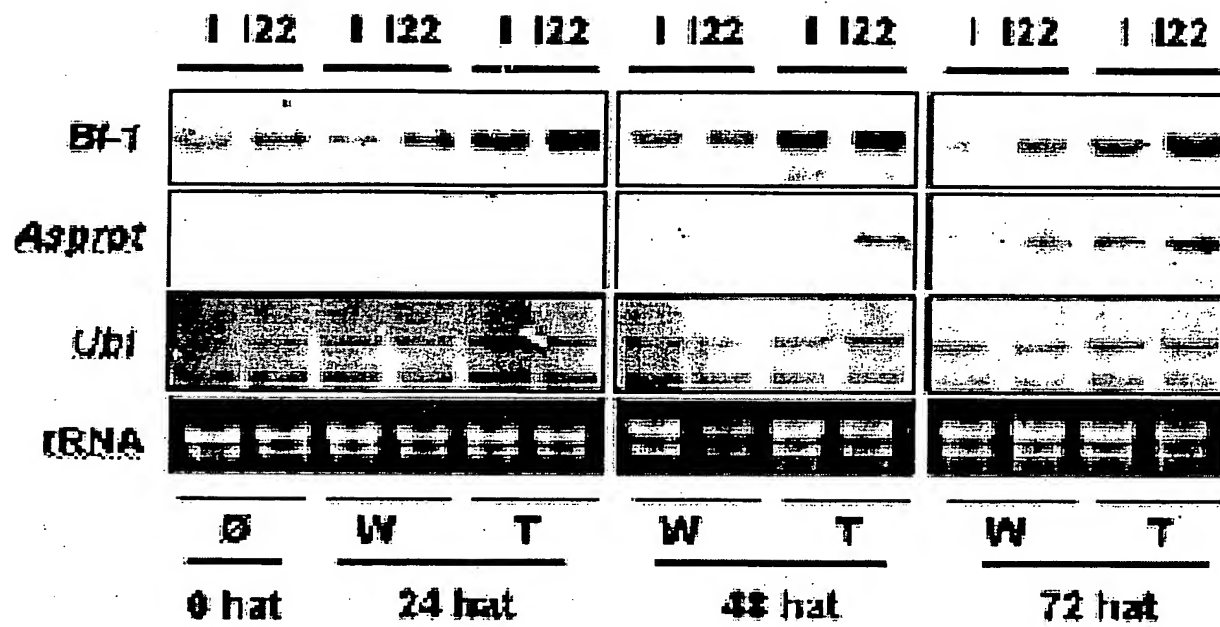
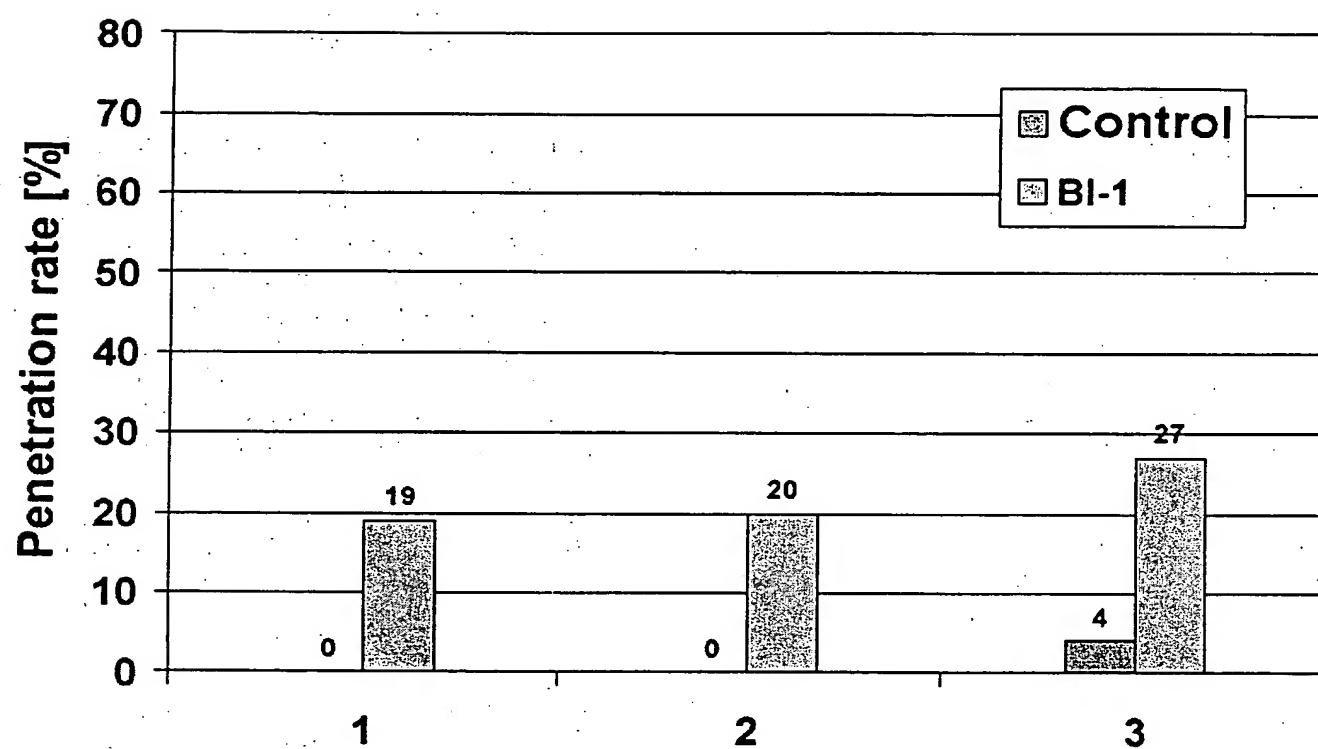


Fig.12

**Fig.13**